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ABSTRACT

The Connecticut State Council on Vocational-Technical Education recommends that federal vocational education funds should provide programs and services for all students, not just the disadvantaged and special needs students. Future curricula should combine academic content with "hands on" learning. The last 2 years of high school should be integrated with two-year colleges and apprenticeships in business. The United States does not commit substantial resources to students making the transition from school to work. Young adults should acquire higher level skills and earn higher wages. The council proposes reorganizing, restructuring, and reforming K-12 education. In Connecticut, federal funds are distributed in four sections: programs for special populations; program improvement; community-based programs; and consumer home economics programs. Programs are also provided for both adults and youths through the Job Training Partnership Act (JTPA). JTPA and Carl Perkins funds are often coordinated. (Ten recommendations are proposed and three appendices are provided: (1) Carl Perkins Vocational Education Act--proposed budgets; (2) examples of programs and services in Connecticut through the Carl Perkins Act; and (3) performance indicators for JTPA by service delivery area.) (NLA)

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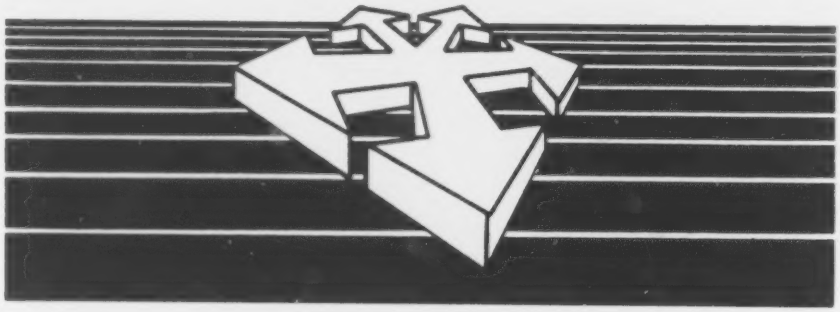

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A Report of the Connecticut State Council on Vocational-Technical Education

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REFINING OUR VISION: NEW APPROACHES TO EDUCATION IN CONNECTICUT

A Report of the Connecticut State Council on Vocational-Technical Education
61 Woodland Street, Hartford, Connecticut 06105 Telephone: 566-4035
March, 1991

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REFINING OUR VISION: NEW APPROACHES TO EDUCATION IN CONNECTICUT

Introduction

Public Law 98-524, called the Carl D. Perkins Vocational Education Act, provides federal funds to each state for vocational education programs and services.

Connecticut's share of the funds has been approximately $8.5 million per year for the last two years. The Act was reauthorized, with amendments, in September, 1990, and the state expects to receive approximately the same amount of money each year for the next five years.

The federal legislation mandates that the governor of each state appoint a council on vocational education to oversee the funds spent in the state, although the state Department of Education is responsible for administering the funds. The state councils are also directed to serve as research and information sources on vocational and technical education and to promote such education in any way possible.

The Connecticut State Council on Vocational-Technical Education has thirteen members: seven from the private sector, including labor, and six from the public sector.

The state councils are asked to produce a biennial report that shows the use of federal funds and talks about the availability of adequate vocational and technical programs and services within the state. This report fulfills that mandate.

EXECUTIVE SUMMARY

Federal vocational education funds in Connecticut help to provide better programs and services for the disadvantaged and other students with special needs.

Improved vocational programs are essential, but the State Council on Vocational-Technical Education believes that the larger need is for the state to find ways to improve the knowledge and skills of **all** of our students. If we do not, the state will fail to compete economically with other regions and other countries.

The State Council believes that we should expect all students to reach a high standard of education by age 16, that we should ensure that future curricula combine a strong academic content with a "hands on" learning style and that the last two years of high school should be integrated with two-year colleges and apprenticeships in business.

Seventy percent of the jobs in America will not require four years of college education by the year 2000, but most of our educational efforts and resources go toward those who plan to attend a four-year college directly after high school.

Unlike the other nations with which we compete, America does not commit substantial resources to helping students make the transition from school to work. We assume that, sooner or later, young adults will find their way into appropriate jobs in the labor force.

The result is that many young adults lose years that could have been spent acquiring higher level skills and higher wages and the Connecticut economy loses the greater productivity that is produced by more highly skilled workers.

The Council is aware that there is a movement in the United States to reorganize, restructure and reform K-12 education. Many of the recommendations we make in this report are based on some of the ideas that are being discussed and implemented throughout the country.

In particular, the Council has used the report, **"America's Choice: high skills or low wages!"** published by the National Center on Education and The Economy's Commission on the Skills of the American Workforce as a basis for many of our recommendations for change

STATE COUNCIL RECOMMENDATIONS

1. The 10th grade mastery testing that is planned by the State Board of education to be in use by 1993 should be structured as follows:

   -The test should give students the ability to demonstrate competence in their knowledge of reading, writing, math, science and social studies and the skills of problem solving, decision making and conflict resolution.

   -The test should represent a consensus on the knowledge and skills that the Connecticut community believes are essential for graduates to succeed in the labor force and to contribute to the state's economy.

   -Recognizing that tests influence what is taught, we believe that the state should ensure that the knowledge required on the test matches the level of knowledge expected of students in countries that compete with us and that future curricula should combine a strong academic content with a "hands on," problem-solving learning style.

   -The test should not be designed just to measure what students can give back on a one-time, paper-and pencil test. Portfolios, interviews and group work could also be included. Students should be able to work at this effort until the knowledge and skills are mastered.

   -Results of the testing should be on a student's record, and employers, as well as post-secondary institutions, should be encouraged to ask for results.

2. The State Board of Education and local boards should require that **the major proportion of school resources** be focused on preparing **all** students to master the knowledge and skills represented in the mastery testing.

3. The State Board should develop incentives to encourage all students to learn the knowledge and skills represented in the mastery testing. Such

incentives might include work/study programs, alternative learning environments or salary differentials by business for those who master the desired knowledge and skills.

4. The State Board of Education should create a system of learning centers that gives dropouts and others who have difficulty in the traditional system an opportunity to master the needed knowledge and skills. The centers could be supported by the state education grants that would otherwise go to the school district.

5. The State Board of Education and the Board of Governors for Higher Education should require that all high schools give 11th and 12th grade students the opportunity to be in a program which integrates their high school courses with courses in two-year colleges or which combines high school study with apprentice positions in business.

6. The Connecticut Employment and Training Commission should create a study group to recommend to the Governor ways for business and government to share equitably in the costs of providing basic literacy and skill training for employed workers.

7. The Governor should direct state agencies to create a board in each region that can coordinate employment and training programs, learning centers, labor market information and assistance. The board should oversee the functioning of a system that makes a continuum of educational services available to all students and workers and that leads to technical and professional certificates and associate degrees.

8. The state Board of Education and the Board of Governors for Higher Education, with help from the Statewide Advisory Committee on the Vocational-Technical Schools and the State Council on Vocational-Technical Education, should evaluate:
   -The mission and role of the vocational-technical schools to determine whether they are meeting the needs of the economy as well as those of the students

-The role of vocational education in local high schools;
-The role of vocational and technical education in the economy of the state.

9. The State Board of Education should ensure that classroom instruction for registered apprentices that is provided through the vocational-technical schools should be made available and accessible for all who need it.

10. The State Board of Education should direct vocational-technical schools to increase the number of programs that train and retrain adults for industry and to coordinate them with programs in the two-year colleges.

Taken as a whole, these recommendations propose enormous changes in the way we educate our children, in the way we introduce them to the adult world of work, in the way we recapture the abilities of those who drop out of the system too early and in the way we coordinate the substantial resources that are devoted to education and training.

The State Council believes that these changes are vital throughout the U.S., but we are convinced that they particularly apply to our state of Connecticut.

The economy of Connecticut depends upon exports to maintain our high per capita income. To export, we must compete with countries that have no doubts about connecting their educational systems to their economic needs. They invest in human capital. They know that that is the only way to ensure the affluence of their citizens.

We must not make the mistake of thinking that we have plenty of time to respond and that perhaps our non-directive, laissez-faire approach will get us through in the end. Average hourly wages for production workers in the U.S. are already below the wages of workers in Germany and Sweden and just above Japan's.

The gap in income will continue to increase unless we can match the education and skills of our workers with theirs. We cannot do that without completely restructuring our educational system.

REFINING OUR VISION: NEW APPROACHES TO EDUCATION IN CONNECTICUT

Section I

The Problem

Since the last biennial report was published in 1989, Connecticut has entered a recession. The 1989 report talked about a labor shortage which does not now seem evident in the state.

But, in fact, the present economic downturn is just masking the fact that when things improve, the state will not have enough people in the labor force to support the needs of a fully functioning economy.

There are several reasons for this problem with the labor force:

1) The demographics of Connecticut are changing. There will be 44 percent fewer 18-year-olds in 1995 than there were in 1979. A recent study for the state Department of Housing says that the number of 20- to 24-year-olds will drop by more than half by the year 2000, while the number of people aged 25 to 34 will be down by 24 percent. The "baby boom" produced many new entrants to the labor force, but now we have far fewer young adults available.
2) The state has increasing numbers of residents who do not reach working age with the skills needed by a sophisticated economy. In a recent report on twenty-five priority school districts (lower income districts of varying sizes), the mean annual dropout rate for 1988-89 was 8.3% for grades 9-12. Although not presented in this way in the report, the results could mean that if a class were to lose 8.3% of its members for each of four years, one-third of the members would not finish with the class. The rate is higher for the large urban districts and smaller for the state as a whole, but, nevertheless, an unacceptably large number of our students do not finish high school.
3) Our schools are poorly equipped to provide students with the knowledge and skills needed to make the transition into an adult, working world.

THE FAILURE OF STUDENTS TO BE PREPARED TO SUCCEED IN THE LABOR FORCE IS THE FOCUS OF THIS REPORT.

Background

In Connecticut and the rest of the U.S. we have allowed the last two years of high school to become essentially irrelevant to many students by not making a direct connection between what they are studying and what they need to know to succeed in the real world. Consequently, many drop out, but many of those who do graduate spend several years in secondary labor market jobs--such as in fast food and retail--until some of them in their mid-20's, or older, make their way into programs that lead to skills needed by the economy.

Not only do we fail those who do not plan to continue on to a four-year college, but statistics show that a large number who do start college do not finish immediately, or ever, and are also unprepared to enter the labor market with useful skills.

It is an inefficient system. The economy loses the earning power of a great many young adults because we do not recognize the need to help them make the transition to the work force.

Our competitors in other countries manage this much more effectively, and we have a great deal to learn from them.

Creating a better system

The National Center on Education and the Economy's Commission on the Skills of the American Workforce recently published a report called **America's Choice: high skills or low wages!** The Commission studied how other countries prepare their citizens for the work force and then contrasted those methods with those in this country. The Commission makes some interesting points:

-Since 1969, real average weekly earnings in the U.S. have fallen by more than 12 percent. The incomes of the top 30 percent went up and the incomes of the lower 70 percent went down.

-The Commission believes that the decline in incomes is due to the fact that many of the new jobs created in that time only require low skills and, therefore, do not pay high wages

-The Commission found, moreover, that employers did not report a widespread skills shortage in this country. The reason is that many companies are trying to organize their production in ways that do not require high skills or are switching to products that do not require high skills. **The problem, of course, is that in a global economy America's work force will not be paid high wages for low skill work. Without high wages, our national wealth and standard of living will decline.**

-Seventy percent of the jobs in America will not require a four-year college education by the year 2000. But our educational resources and efforts go into the those who plan to go to college.

The Commission studied Germany, Sweden, Denmark, Ireland, Japan and Singapore and found some common values:

-The countries studied insist that all students reach a high educational standard, usually by age 16, and they focus their resources on having everyone reach that standard. **We do not.**

-They design alternative systems of learning so that everyone can attain this high standard before they are expected to enter the labor force. **We do not.**

-They provide "professionalized education" which prepares students who do not wish to enter a four-year college directly after high school for success in the labor force. **We do not.**

-They operate comprehensive labor market systems which combine training, labor market information, job search and income maintenance. **We do not.**

-They support joint, public-private financing for training. **We do not.**

-They have a national consensus on the importance of moving to high productivity forms of work organization and building high wage economies. **We do not.**

The Commission made a number of recommendations which it believes combine the best ideas from other countries with the strengths of the American educational system.

The Connecticut State Council on Vocational/Technical Education supports the recommendations made by the Commission on the Skills of the American Workforce as follows:

The Commission of the Skills of the American Workforce recommends: "A new educational performance standard should be set for all students, to be met by age 16. This standard should be established nationally and benchmarked to the highest in the world."

How could this concept work in Connecticut? In Connecticut, a demonstration of mastery in reading, writing, math, science and social studies is being prepared for the spring of 1993. The State Council recommends that this testing be benchmarked to the standards of our economic competitors. If this cannot be done immediately, it should be phased in so that, eventually, we expect all of our children to be as well educated as our competitors' children. Educational resources should be focused on bringing all students to this standard. Schools should be encouraged to adopt some of the following reform methods:

-Using new teaching methods;
-Including teachers and the community in school governance;
-Decentralizing decision making to the school building level;
-Changing the structure of the school day and the school year;
-Strengthening efforts to have administrators, teachers and students held acountable for the quality of their work;
-Redesigning the goals of education to reflect the changing needs of the economy;
-Revising curricula to match the new goals;
-Expanding the role of local schools in the delivery of other needed social services, such as child care.

The State Council also believes that the 10th-grade mastery test should be converted to the Certificate of Initial Mastery called for in the "America's Choice" report. The goal would be to have students demonstrate mastery over the material by age sixteen, allowing for students to move on to other studies, or they could continue to work on the material until they did demonstrate mastery.

The Council recognizes that a mastery test does not have to be a paper-and-pencil test, only. Demonstrated mastery is the goal, and it can be assessed in various ways, including the use of portfolios, group work and teacher interviews.

If it is politically too difficult for the state to require mastering the required material to receive a diploma, it should, nevertheless, be part of the student's record, so that employers would have some measure of a graduate's knowledge base, which is not presently the case.

The point is not to use mastery testing as a way of punishing students or of keeping them out of higher education, but to use it as a way to focus our resources on the knowledge that we know is necessary to succeed in the larger world. Everyone should succeed.

The Commission points out that more than any other country the U.S. believes that natural ability, rather than effort, explains achievement. We can no longer afford that attitude. We must let students know that effort does count and help them to focus on what is important to know.

In other countries, the disadvantaged are also expected to reach the standard, and they do, with extra resources and help. In this country we expect less of the disadvantaged, despite the evidence that they are quite able to learn under the right educational conditions.

State Council recommendations:

1. The 10th grade mastery testing that is planned by the State Board of Education to be in use by 1993 should be structured as follows:
   -The test should give students the ability to demonstrate

competence in their knowledge of reading, writing, math, science and history and the skills of problem solving, decision making and conflict resolution.

-The test should represent a consensus on the knowledge and skills that the Connecticut community believes are essential for graduates to succeed in the labor force and to contribute to the state's economy.

-Recognizing that tests influence what is taught, we believe that the state should match the level of knowledge required to what is expected of students in countries that compete with us.

-The test should not be designed only to measure what students can give back on a one-time, paper-and-pencil test. Portfolios, interviews and group work could also be included. Students should be able to work at this effort until the knowledge and skills are mastered.

-Results of the testing should be on the student's record, and employers, as well as post-secondary institutions, should be encouraged to ask for results.

2. The State Board of Education and local boards should require that **the major proportion of school resources** be focused on preparing **all** students to master the knowledge and skills represented in the mastery testing.

The Commission on the Skills of the American Workforce recommends: "The states should take responsibility for assuring that virtually all students achieve the Certificate of Initial Mastery."

How could this concept work in Connecticut? The state recently asked twenty-five priority school districts, which includes lower income districts of varying sizes, to gather data on students. The mean annual dropout rate for 1988-89 was 8.3% for grades 9-12. Although the data were not presented in this way, if any one class were to lose 8.3% of its members for each of four years, one-third of the members would not finish with the class. The rate is higher for the large urban districts and smaller for the state as a whole, but, nevertheless, an unacceptably large number of our students do not finish high school.

Young adults without the knowledge that could be represented in the Certificate of Initial Mastery fail to make their way into labor force jobs that allow them to support themselves and their families. Their earning power is minimal, which greatly impoverishes the quality of their lives and, in addition, the economy.

The Commission on the Skills of the American Workforce found that there was very little incentive for non-college bound students to stay in high school, possibly because they had little access to excellent vocational programs and believed that they could just as easily start work in low wage jobs at sixteen, as wait to eighteen. The Commission recommends the creation of learning centers to reach dropouts and to try to help them reach mastery.

Because the number of students dropping out in Connecticut is a serious problem, the State Council agrees that the state should develop a system of learning centers that give high school dropouts, of any age, the opportunity to master essential knowledge and skills.

The state should also seriously consider developing some strong incentives for students to acquire the basic knowledge needed in the adult world. The opportunity to take part in work/study or apprentice programs, or the right to connect high school learning to programs in

two-year colleges can stimulate students to greater effort.

Business should recognize that it has a responsibility to encourage students to master basic skills, perhaps by rewarding young people who acquire them with a wage differential.

State Council recommendations:

3. The state Board of Education should develop incentives to encourage all students to learn the knowledge and skills represented in the mastery testing. Such incentives might include work/study programs, alternative learning environments or salary differentials by business for those who master the desired knowledge and skills.

4. The state Board of Education should create a system of learning centers that gives dropouts and others who have difficulty in the traditional system an opportunity to master the needed knowledge and skills. The centers could be supported by the state education grants that would otherwise go to the school district.

The Commission on the Skills of the American Workforce recommends : "A comprehensive system of Technical and Professional Certificates and associate degrees should be created for the majority of our students and adult workers who do not pursue a baccalaureate degree."

How could this concept work in Connecticut? Other industrial nations offer a continuum of career-oriented educational services beginning with the last two years of high school which prepares graduates to move quickly into a professional level in the work place. Although Connecticut offers certificate programs and associate degrees through the community/ technical college system and other two-year institutions, for the most part there is little coordination with high school programs.

In addition, in other countries businesses are closely involved with the high schools, helping to design curricula and making sure that students understand the connection between what they are being asked to study and the real world, as well as offering work/study opportunities in a great variety of industries.

In Connecticut some high schools and some two-year colleges are creating successful educational continuums and some businesses invite students into their work places, but we need to institutionalize in all schools the concept of making the last two years of high school a continuum, either with higher education and/or with business. The Department of Labor has many years of experience in apprentice programs and should be involved in these efforts.

State Council recommendations:

5. The state Board of Education and the Board of Governors for Higher Education should require that all high schools give 11th and 12th grade students the opportunity to be in a program which integrates their high school courses with courses in 2-year colleges and/or which combines high school study with apprentice positions in business.

The Commission on the Skills of the American Workforce recommends: "All employers should be given incentives and assistance to invest in the further education and training of their workers and to pursue high productivity forms of work organization."

How could this concept work in Connecticut? Connecticut employers find it costly to train and upgrade workers, particularly when those workers need basic literacy education before they can be taught new skills.

Large numbers of our presently employed workers came into the work force without mastering basic educational skills. Now, as companies try to improve their productivity and become high performance organizations by moving responsibility for decision making and quality down to front-line workers, lack of literacy hampers their efforts.

In addition, changing technology requires that workers constantly learn new procedures and processes. This is almost impossible without possessing good reading, writing and math skills.

Competition from foreign competitors guarantees that our workers will have to be as quick to learn as theirs. That will require a constant investment in training by all companies--large and small. The Commission on the Skills of the American Workforce recommends that a system be created in which companies invest at least one percent of their payroll in training and that public technical assistance be provided to help companies become high performance organizations.

The State Council believes that the Connecticut Employment and Training Commission, which has members from both the public and private sector, should study how needed retraining programs are supported in other countries and should recommend a system to support such training efforts here.

State Council recommendations:

6. The Connecticut Employment and Training Commission should create a study group to recommend to the Governor ways for business and government to share equitably in the costs of providing basic literacy and skill training for employed workers.

The Commission on the Skills of the American Workforce recommends: "A system of Employment and Training Boards should be established by Federal and state governments, together with local leadership, to organize and oversee the new school-to-work transition programs and training systems we propose."

How could this concept work in Connecticut? Connecticut has a variety of programs and services available to help people entering employment. Some of these have been coordinated through the Coordinated Education and Training Opportunities (CETO) effort. CETO was designed to combine funds from the Department of Education and the Department of Income Maintenance and to have a collaboration of organizations and agencies plan at the regional level. The intent is to decentralize decision making to the regional level, which should improve the assessment of needs and the continuum of services offered.

In addition, the Connecticut Employment and Training Commission has proposed creating regional human resource development boards which would coordinate even more of the available programs and services.

The Council believes that it is time for the state to design a comprehensive system by building on the work that has already been done. The system should coordinate all education and training programs and information for employment, including the learning centers for dropouts. Making the board responsible for dropouts and others who have difficulty reaching mastery of skills through traditional programs is a large departure, but it must be managed. We cannot continue to lose so many potential workers.

State Council recommendations:

7. The Governor should direct state agencies to create a board in each region that can coordinate employment and training programs, learning centers, labor market information and assistance. The board should oversee the functioning of a system that makes a continuum of educational services available to all students and workers and that leads to technical and professional certificates and associate degrees.

Section II
UNDERSTANDING THE CONNECTICUT ECONOMY AND THE ROLE OF EDUCATION

What Does Our Economy Need?

The economy of Connecticut is very diverse. It offers jobs in manufacturing, financial services, business services, personal services, retail, leisure, recreation, agriculture, education and government, etc.

Up until 1989 the state was experiencing a labor shortage, but the recent recession has meant that companies are now hiring fewer people. The State Council assumes that the state's economy will eventually improve, and businesses will once again be searching for employees.

The State Council also believes that it is reasonable to assume that when that time comes, the labor shortages will be in some of the same categories that had shortages before the recession.

What are the areas of labor shortage?

The areas of labor shortage include:

-Engineering and other technicians;
-Skilled manufacturing workers;
-Business and office support workers;
-Health workers.

These jobs have some aspects in common:

-The economy produces large numbers of them;
-They are "good" jobs, with reasonable pay and benefits and stability over time;
-All of them have a technology base of some kind, especially in the understanding and the use of computers;
-All of them require two years or less of college to begin work (although all will require frequent retraining on the job); and,
-The knowledge base and courses required could be integrated into the high school curriculum.

What Systems Do We Have To Educate and Train for these Jobs?

Local high schools

With some exceptions local high schools are not giving students the skills needed to move into these career areas.

It should come as no surprise to most people to hear that high schools, in general, feel that they are judged on the number of graduates they are able to send to post-secondary education, particularly four-year colleges. There is community pressure on the schools and the students to make four-year college the goal of high school education; no one is around later to notice that many of those who start do not finish and are ill-prepared to find satisfying work.

Studies show, moreover, that 70 percent of our jobs over the next decade will not require a four-year college education, although many of that 70 percent will require post-secondary education.

Although at least fifty percent of our high school students would prefer not to enter a four-year college directly upon graduation, most schools have not offered many alternatives: usually, a vocational curriculum that is often seen as too narrowly focused and cutting off alternatives, and a general curriculum designed to offer "interesting" courses which usually have neither an academic nor a vocational content.

Student enrollment in vocational education courses

Student enrollment in vocational courses in local high schools has been dropping for some of the following reasons:

-Connecticut has fewer high school students because of demographics;

-Higher graduation requirements have left students fewer chances to choose courses that do not fill academic requirements;

-As schools have come under increasing budget pressure, they have tended not to make the investment in quality vocational equipment, curricula and teachers that would attract students;

-Students tend to see vocational courses, as they are presently offered, as dead-end.

Vocational-Technical Schools

The state operates seventeen regional vocational-technical schools and five smaller, "satellite" schools for the purpose of providing high school students and adults with vocational and technical education. High school students who wish to enter a trade upon graduation can choose to attend a regional school rather than a comprehensive high school in their town or city.

The schools were created in an era when many high school students wanted to enter the trades and when business was anxious to hire trained students directly upon graduation. Centralizing the extra costs of equipment and the faculty expertise in a regional school made sense.

Although these schools are providing students with useful skills, they also form the part of the educational system that is supposed to help industry fill its need for skilled production workers, but that is no longer happening.

Have Times Changed?

They seem to have. Some of the important changes are:

-Declining numbers of high school students have meant fewer applications to the schools;

-Declining numbers of high school students have meant that local schools, which lose the state grant for students who go to the V-T schools, would just as soon keep students in their own systems;

-Demographic changes have meant that there are fewer high school students with parents and siblings in the traditional manufacturing trades --relatives who might encourage their interest;

-Many students today come with less than adequate preparation in reading, writing and math. Consequently, the schools offer courses of study meeting the needs and interests of these less well prepared students, who also may not have any knowledge about or interest in the traditional trades. Many of these courses of study are not in technical areas.

-The result in this change in emphasis is that the schools are graduating fewer high school students with technical skills who might help fill the economy's needs.

The schools also offer training programs for adults. For instance, classroom courses are offered for employed apprentices so that they can advance to the journeyperson level. The schools have been criticized lately because budget pressures have caused them to decrease the number of courses available, making it difficult for apprentices to get the classroom training they need to fill the requirements of the Department of Labor.

A fee of $100 per course has now been proposed, which business may not welcome. The important issue, however, may not be the fee, but the ability of apprentices to get the courses they need, when they need them. If there is to be a fee, the vocational-technical system should greatly increase the availability of the classroom training.

The schools run an extensive program for adult refugees and immigrants which combines remedial education, English-as-a-second language and hands-on skill training.

The schools do offer evening courses in the various trades, but what is offered depends more upon current budgets, available faculty and perceived student demand than on a coherent vision of what is needed to keep the economy healthy.

Two-year Colleges and Training Institutions

The state's community/technical college system and a number of independent two-year colleges and training institutions are also available to help students attain the professional certificates and associate degrees that are needed.

The state's twelve community colleges offer vocational programs, programs for transfer to four-year colleges, remedial programs and courses of interest to the community.

The five technical colleges educate engineering assistants for industry, offer various certificate programs and train industrial employees in new technologies.

The enrollment in the community colleges has increased over the last several years, to some extent because the colleges have become a second chance system for many adults who failed either to graduate from high

school or who graduated without enough education or job skills to allow them to succeed in the labor force.

Enrollment in technical colleges decreased substantially for five years, but seemed to level off in 1990-91. Manufacturing uses large numbers of engineering technicians, and graduates have usually been able to get jobs readily.

Engineering technican education is rigorous, however, and enrollment has been hurt by the fact that there is a declining population of high school students who have an interest in technical jobs and an adequate math and science background. In addition, a declining number of high school graduates has meant a greater competition for students by colleges. The technical colleges were slow to make some of the changes that would help them attract enrollment.

The recently completed Strategic Plan for Technical Education outlines the direction of the community and technical colleges over the next few years: expansion into additional program areas needed by the economy; more partnerships with high schools; better marketing of the schools' programs.

Conclusions on the "Training System"

-Although there is potential for local high schools to start the education and training needed for the jobs in demand, only business and office education is regularly offered;

-Many of the students coming to the regional vocational-technical schools today have special education needs and are not academically well prepared. As a result, they may not choose the technical areas of study that the economy needs. (Such students may also not be convinced of the value of choosing technical areas, such as skilled manufacturing.)

-Programs for adults in the regional vocational-technical schools are not part of a coherent plan to support the economy.

-State and local boards of education are reluctant to support extensive technical programs in the comprehensive high schools.

-Community/technical colleges also have difficulty drawing students with adequate educational skills and need to spend more and more resources on basic literacy. In addition, as budgets become tighter, the more costly technical courses may be the easiest to cut, particularly if they have lower enrollment than other courses.

How should be the regional vocational-technical schools, the comprehensive high schools and the community/technical colleges interact with each other in helping to prepare workers for our economy? At the present time the state seems to be unsure about the answer to that question.

State Council Recommendations:

Institute Recommendation No. 5 made in the previous section, "The state Board of Education and the Board of Governors for Higher Education should require that all high schools give 11th and 12th grade students the opportunity to be in a program which integrates their high school courses with courses in two-year colleges or which combines high school study with apprentice positions in business."

8. The state Board of Education and the Board of Governors for Higher Education, with help from the Statewide Advisory Committee on the Vocational-Technical Schools, the State Council on Vocational-Technical Education and other appropriate groups, should evaluate:
   - -The mission and role of the vocational-technical schools to determine whether they are meeting the needs of the economy as well as those of the students;
   - -The role of vocational education in local high schools;
   - -The role of vocational and technical education in the economy of the state.

9. The State Board of Education should ensure that classroom instruction for registered apprentices that is provided through the vocational-technical schools should be made available and accessible for all who need it.

10. The State Board of Education should direct vocational-technical schools to increase the number of programs that train and retrain adults for industry and to coordinate with programs in the two-year colleges.

Section III

WHAT IS THE ROLE OF FEDERAL CARL PERKINS' VOCATIONAL EDUCATION FUNDS IN CONNECTICUT?

Federal Carl Perkins' funds for 1989 and 1990 were approximately $8.5 million each year. The funds were distributed in four sections:

1. Programs for special populations: handicapped; disadvantaged; limited English proficiency, student and adult; single parent/homemakers; students in non-traditional programs and correctional institutions.

2. Program improvement: new and expanded programs, including equipment; career guidance; State Occupational Information Coordinating Committee; professional development; curriculum development; vocational student organizations and employment and training for urban youths.

3. Programs by community-based organizations.

4. Consumer home economics programs.

Some of the grant money was disseminated by a formula that was approved in the state plan and the federal legislation. Other funds were distributed through the CETO (Coordinated Education and Training Opportunities) process which combines funds from several grant programs to avoid duplication and to stretch resources. In addition, funds were awarded directly to programs for sex bias elimination, correctional institutions and bilingual adult training.

Appendix A has a chart of federal vocational education funds distributed by the state Department of Education. In general, however, the following points can be made about the funds:

-Most of the funds given to high schools have been used to provide support services to disadvantaged and handicapped students so that they can enroll in and succeed in vocational education courses that the school already runs.

-In addition, local schools have depended heavily upon the federal funds to buy needed equipment.

-Money for adults appears to go to a combination of support services and training.

-At the state level money has gone to a number of programs that offer help to all school districts; upgrading and retraining local teaching staff; writing curricula that can be used by local systems; helping local schools improve the career guidance available to students.

ARE CARL PERKINS' FUNDS EFFECTIVE?

Funds were dispersed to districts on the basis of a formula which took into account the number of disadvantaged and handicapped students in the district. Not all school districts were eligible to receive Carl Perkins' funds because they did not contain enough of such students.

Because Carl Perkins' money was designed to help disadvantaged and handicapped students, the state's larger and lower income school districts have received most of the funds.

Much of the money was then spent to improve access to regular vocational programs and to improve the success rate of students who might not have made it through without extra tutoring or other support services. Money was also spent on equipment.

All eligible districts could also compete for other "pots of money" that were earmarked for program improvement, guidance and counseling, curriculum development, consumer home economics, increasing enrollment in non-traditional programs, etc.

Appendix B lists examples of the ways that school districts spent their Carl Perkins' funds.

It is not easy, of course, to determine whether each of those programs was truly effective. If an overall view is taken, however, some comments may be made:

1) Carl Perkins' funds have made it possible for some disadvantaged and handicapped students to get tutoring and other support services that would not have been available without the federal funds. This has improved the success rate of these students.
2) Districts have been able to buy equipment that the districts would not have purchased through their local budgets.
3) Districts have been able to experiment with innovative programs and approaches. Innovative programs and approaches rarely make it into local budgets, although if the federally-funded programs are very effective, a successful case can sometimes be made for incorporating them into the school program.
4) By holding out federal funds as a "carrot", vocational directors have sometimes been able to draw curriculum designers, guidance counselors and even academic faculty into joint efforts to make the whole system work more effectively for students.
5) Districts have been able to do some development of staff, something that is particularly important in programs that are supposed to prepare students for a rapidly changing business world. Local budgets rarely include sufficient funds for upgrading of teachers.

In addition to funds dispersed to secondary schools, approximately $450,000 a year was distributed to post-secondary institutions. This money was spent on equipment, textbooks and instructional materials, as well as support services, such as assessment, career counseling and remediation for handicapped, disadvantaged and limited-English-speaking students.

In short, Carl Perkins' money has funded some useful programs, services and equipment in secondary and post-secondary schools for disadvantaged, handicapped and limited-English-speaking students.

Have all students who needed help been reached? No. Has the money been able to bring about permanent improvements in the educational system? No. Does this mean that the Carl Perkins Act is a failure. Definitely not.

Considering that the state and local cities and towns spend about three billion dollars a year on education, the $8.2 million from the federal government through the Carl Perkins Act seems like a very small amount of money. Nevertheless, through the years, many schools have come to rely on the funds, both to supplement their meagre equipment accounts and to allow them to try out new ideas. In addition, the State Department of Education has used the funds to support staff and programs to stimulate innovative approaches to vocational education.

Clearly, the state is happy to have the Carl Perkins' funds, but the federal money cannot, and was not intended, to solve our larger problem, which involves making the overall structural changes needed to make every student's education relate to the larger world.

Section IV

THE ROLE OF FEDERAL JOB TRAINING PARTNERSHIP ACT (JTPA) FUNDS

The state received about $16 million in program year 1989 and $15 million in program year 1990 from the federal government through the Job Training Partnership Act (JTPA). The program is structured to offer short-term training to the disadvantaged so that they can gain the skills they need to get unsubsidized jobs in the private sector.

Seventy-eight percent of the federal money goes directly to one of nine Service Delivery Areas (SDA's) in the state to be spent on programs and services to get people employed. Many of the programs are delivered through community-based organizations and various educational institutions.

Programs are provided for both adults and youths through JTPA. Some comments on the program:

1) The amount of money Connecticut receives through JTPA does not begin to provide enough programs for the large number of disadvantaged who need help.
2) When Connecticut had a labor shortage, the JTPA programs were relatively successful at placing the people they trained in jobs.
3) As Connecticut's economy weakens, more disadvantaged citizens are asking for help from the JTPA system. However, the programs are having difficulty placing clients in jobs.
4) Most people who qualify for the programs and who have been outside the labor force for a considerable period of time, need substantial help in acquiring basic education before they can be trained. In addition, they need support services, such as day care, transportation, housing and personal and family counseling.

5) Because program operators do not get paid if they are not successful in placing adults in jobs, JTPA administrators may begin to put more money into programs for youth, which do not have the same stringent performance standards. If that occurs, there will be a need for more coordination between JTPA and Perkins' funds.

Appendix C gives the performance indicators for each Service Delivery Area. The "model" column shows the performance standards for the area, while the "actual" column shows what was achieved. In general, the JTPA administrators were quite effective in getting people employed and did it at a reasonable cost.

In the past several decades a great deal has been learned about how to train the disadvantaged, and Connecticut has several very effective programs. It has become increasingly evident, however, that much of our "training" problem is really an "education" problem. Gradually, JTPA programs have had to spend more and more of their resources on basic literacy programs before they can begin to deal with skill training.

JTPA funds are not adequate to educate and train all the people who need help, and the state will need, perhaps through the employment and training boards, to coordinate resources and add to them, as well.

MEANWHILE, THE STATE CANNOT AFFORD TO LET ANY MORE YOUNG PEOPLE OUT OF SCHOOL WITHOUT HAVING A SOLID BASIC EDUCATION AND SOME KNOWLEDGE OF HOW THE REAL WORLD FUNCTIONS. WE CANNOT AFFORD THE COSTS TO THE ECONOMY OR THE COSTS TO THE LIVES OF CITIZENS.

Section V

COORDINATION BETWEEN JTPA AND CARL PERKINS' FUNDS

As mentioned at an earlier point, several funding strands are distributed through the CETO (Coordinated Education and Training Opportunities) process. Among these are funds from Carl Perkins; the state-funded Jobs for Connecticut's Youth and Department of Income Maintenance-remediation funds. In addition, 8 percent of the JTPA funds coming to the state are put into the CETO process, which combines the funds from these grant programs to avoid duplication and to stretch resources.

The CETO process has been an effective way for the state to begin to coordinate funds. As mentioned previously, the State Council recommends that the state extend this process into a system of employment and training boards.

The State Council also agrees with the state's decision to ask all secondary and post-secondary educational institutions to discuss their plans for next year's Carl Perkins' funds with the CETO collaborative in their area. The institutions are also required to get the collaborative to sign off on their application. The Council believes that this will continue to ensure that there is some coordination of education and training funds in the region.

Section VI

THE CARL PERKINS ACT OF 1990

In September the Congress authorized the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990 for the next five years. Although the state's funds will remain approximately the same, the Congress intended to drive the money in some new directions. These include:

-Programs are supposed to be large enough to make a difference; therefore, unless a school district would receive at least $15,000 under the formula, it will not receive any money unless it forms a consortium with other schools.

-Funds must be used in a way that integrates academic and vocational subjects and provides a coherent sequence of courses.

-Funds must be used even more directly for the benefit of special needs students.

-Performance standards must be developed, for the first time.

-More money will go to the post-secondary level.

-Funds are offered for "tech prep"-- joint programs of study between secondary schools and two-year colleges or apprentice programs.

Evidently, the Congress wanted to try to ensure that the funds it offered were not spread too thinly to have an effect. Members also recognized, correctly, that if vocational courses do not have a credible academic component, particularly in math and science, students will fail to get what they need to succeed in a work world that increasingly depends upon technology. In addition, the separate section for "tech prep" programs also recognizes the need to connect the last two years of high school with the real world.

Section VII

AN UPDATE ON RECOMMENDATIONS FROM THE 1989 BIENNIAL REPORT

Progress has been made on several of the recommendations made by the State Council in its 1989 report:

-The State Department of Education has provided technical assistance to the local districts so that they could incorporate Connecticut's Common Core of Learning into vocational-technical education. With Perkins' funds the state has published a guide which identifies how each of the elements of the Common Core could be integrated into the nine main subject areas in vocational education, such as business office education, technology education, etc. Workshops and other meetings have been held with the local district people.

-The Department now offers local school districts several "hands-on" curricula, such as the Principles of Technology curriculum, and is urging the districts to use them.

-The State Department of Education is now urging local districts to grant "cross-over" credits for equivalent course work taken in vocational education courses. The Department funded a study to identify what was the present policy in 92 districts, and then, made this information available to all districts to encourage more of them to follow the lead of districts who are allowing cross credits.

-Although the new Carl Perkins' legislation does not direct money to the Vocational Student Organizations, the Division of Vocational, Technical and Adult Education will continue to support them.

Section VIII
PUBLIC HEARING

The State Council held a public hearing on May 14, 1990 at the Legislative Office Building in Hartford. The topic was, "A realistic look at how well the education, training and employment programs in Connecticut are addressing the conditions and requirements necessary to achieve a "world class" work force in the state and how problems can best be remedied."

Five panels of experts participated: manufacturing, agriculture/ agribusiness, service industries, special populations and education/ business partnerships.

The following comments summarize the results:

1. All workers need to be well educated and trained and retrained if Connecticut businesses are to compete in a global market place.
2. The math and science skills of all students must be strengthened to succeed in any of the industries represented.
3. Workers today need strong communication and problem-solving skills.
4. High schools should make more use of 2+2 programs which integrate courses in the last two years of high school with those in two-year colleges.
5. Teachers, guidance counselors and administrators need to spend time in business to understand the high level knowledge and skills needed there.
6. Agriculture/agribusiness offers more job opportunities in Connecticut than is usually understood.
7. The "general track" in high schools does not provide graduates with the skills needed by business.
8. Students with learning disabilities are using post-secondary institutions to get employment skills, but more services are needed, both at that level and in the high schools.
9. Computers are a superb tool for people with learning disabilities, helping them compensate for learning problems.

Section IX

CONCLUSION

In case we have forgotten, the present recession should remind us that the well-being of our economy and our citizens is always very vulnerable.

Although the recession will ease in time, there is still the question of whether our state businesses will be able to compete with the businesses of other countries in this global economy.

If they cannot, our standard of living will fall.

There are many elements that go into making businesses competitive: tax structures, energy costs, stable government policies, competent management, to name a few. But , clearly, equally important is the ability of a state to provide the labor force needed by companies struggling to respond to rapidly changing economic conditions.

We are competing with countries that have no difficulty believing that they should connect their educational systems to their economic needs. They are convinced that that is the only way to ensure the affluence of their citizens.

We must overcome that philosophical hurdle here and make the changes necessary to connect all our children to the real world while they are still in school and to recapture those who have left the system too early.

The Council recognizes that many groups are calling for fundamental reform in the educational system. We look forward to working with them to bring about the changes needed in Connecticut.

Appendix A

Carl D. Perkins Vocational Education Act (P.L. 98-524)
Proposed Budgets

	1988-89	1989-90
Basic Grant	$8,224,182	$8,447,051
Administration/Leadership		
7% Administration	575,692	591,294
13% Leadership	1,069,144	1,098,117
TOTAL	1,644,836	1,689,411
Title II A		
22% Disadvantaged	1,750,000	1,728,267
10% Handicapped	800,000	785,576
1% Corrections	76,484	78,558
12% Adult Training - Bilingual	917,819--270,000	942,691--270,000
VEGE	647,819#	672,691#
8.5% Single Parent	650,122 #	667,739 #
3.5% Sex Bias Elimination	267,697	274,951
TOTAL	4,462,122	4,477,782
Title II B		
Program for At-Risk Youth	100,000	211,523
High Technology Equipment	1,000,000	1,000,000
Guidance and Counseling	190,000	190,000
SOICC	70,000	70,000
Professional Development	250,000	283,335
Curriculum Development	90,000	100,000
Vocational Program Improvement (including VIP)	120,000	125,000
Vocational Student Organizations	150,000	150,000
Plastics On Wheels	147,224	150,000
TOTAL	2,117,224	2,279,858
Title III Part A		
Community-Based Organizations	70,642 #	62,453 #
Title III Part B		
Consumer and Homemaking Education		
Consumer/Home Economics Educ. Grants	110,000	110,000
Grants to Eco. Depressed Areas	115,800	115,800
Statewide Activities/Leadership	95,007	95,007
State Administration (6%)	20,477	20,477
TOTAL	341,284	341,284
TOTAL STATE GRANT	8,636,108	8,850,788
#VEGE GRANTS		
Single Parent/Displaced Homemaker	650,122	667,739
Adult Training	647,819	672,691
CBO (Title III A)	70,642	62,453
TOTAL	1,368,583	1,402,883

Appendix B

Examples of Programs and Services in Connecticut Funded Through The Federal Carl Perkins Act

For handicapped and disadvantaged students:

- -Inservice training for teachers;
- -Assessment of skills;
- -Modification of equipment and facilities;
- -Development of information about job opportunities;
- -Job counseling;
- -Development of new curricula;
- -Purchase of equipment, textbooks and instructional materials;
- -Remedial tutoring.

Other programs or services:

-A Bilingual Vocational Training Program at twelve of the regional vocational-technical schools for 3,829 limited English-speaking residents, immigrants, and refugees, both adults and out-of-school youths.

-Seminars for vocational and technical school teachers and administrators to improve opportunities for girls and women in traditional occupations.

-Funding for Plastics on Wheels, which is a mobile plastics laboratory used to extend the skills learned in woodworking technology to those needed in plastics technology.

-Equipment was purchased that incorporated the latest technology used in computers, electronics, robotics, hydraulics, pneumatics, fludics, lasers and telecommunications, etc.

-Funding for the State Occupational Information Coordinating Committee (SOICC). SOICC provides a computerized system containing information on supply and demand in Connecticut's job market.

-Professional development for teachers in the skilled trades, occupational subjects, trade-related subjects, health occupations and technology education.

-Funding of projects to coordinate high school and two-year college curricula.

Appendix C
Performance Indicators for JTPA by Service Delivery Areas
PY 1989

SDA	Adult Entered Employment Rate (%)		Adult Cost Per Entered Employment ($)		Adult Avg. Wage At Placement ($)		Adult Welfare Entered Emp. Rate (%)	
	Model	Actual	Model	Actual	Model	Actual	Model	Actual
Bridgeport	62.89	59.46	5286	4335	6.18	7.58	51.15	51.96
Bristol/New Britain	68.11	83.18	5282	4308	5.69	7.83	60.68	75.61
Danbury/Torrington	69.04	80.85	4443	3262	5.83	7.15	50.31	88.00
Danielson/Windham	70.64	73.91	4555	2611	5.21	6.78	60.32	67.57
Hartford	61.04	74.29	5042	2397	5.38	7.38	48.83	65.40
Meriden/Middletown	69.26	74.49	4744	3126	5.67	7.93	58.26	65.85
New Haven	67.11	73.10	4686	2304	5.40	6.99	54.22	70.87
New London	57.79	91.45	4989	2256	4.96	6.82	57.40	93.18
Waterbury	64.97	71.19	4653	3485	5.20	6.57	55.13	64.00

SDA	Youth Entered Employment Rate (%)		Youth Positive Termination Rate (%)		Youth Cost Per Positive Termination ($)	
	Model	Actual	Model	Actual	Model	Actual
Bridgeport	39.44	46.28	73.59	71.52	5292	3579
Bristol/New Britain	36.19	82.20	72.04	90.68	4839	2319
Danbury/Torrington	33.91	66.67	76.23	91.95	4651	2169
Danielson/Windham	51.52	72.32	75.15	79.46	5065	2565
Hartford	58.13	53.50	69.76	77.78	6327	4789
Meriden/Middletown	19.81	45.63	71.99	69.90	5498	2767
New Haven	46.22	57.88	74.22	86.45	5104	2169
New London/Norwich	29.25	44.90	74.37	96.60	4412	1979
Waterbury	39.31	39.31	75.09	90.56	4771	2383

* From The Connecticut Employment and Training Commission 1989-1990 Annual Report